

THAT WHICH IS CLAIMED:

1. An isolated DNA molecule comprising a nucleotide sequence having at least 90% sequence identity to SEQ ID NO. 1, wherein said nucleotide sequence encodes a polypeptide having poly ADP-ribose polymerase activity, said polypeptide comprising
5 at least two functional zinc fingers.

2. The isolated DNA molecule of claim 1, wherein said nucleotide sequence comprises the sequence set forth in SEQ ID NO. 5.

10 3. A chimeric nucleic acid sequence comprising a promoter capable of driving expression of a nucleic acid sequence in a plant cell operably linked to a nucleotide sequence of claim 1.

4. A vector comprising the chimeric nucleic acid sequence of claim 3.

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5. A plant cell transformed with the chimeric nucleic acid sequence of claim
3.

6. A transformed plant comprising the chimeric nucleic acid sequence of
20 claim 3.

7. The transformed plant of claim 6, wherein said plant is a dicot.

8. The transformed plant of claim 6, wherein said plant is a monocot.

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9. The transformed plant of claim 8, wherein said monocot is maize.

10. A method for modulating the metabolic state of a plant cell, said method comprising transforming said plant with a DNA construct, said construct comprising a
30 promoter that drives expression in a plant cell operably linked to a nucleotide sequence of claim 1.